

AMENDMENTS TO THE CLAIMS

Claims 1-31 (Canceled)

32. (New) A method for multiplexing digital data, wherein a packet of digital data elements arranged 1..n is sent in at least a first stream of data elements starting with sending data element 1 and further upward in sequential order, and a second stream of data elements starting with sending data element n and going downward in sequential order, and sending stops when the entire packet is sent once.

33. (New) The method according to claim 32, wherein the first stream and second stream are simultaneously sent.

34. (New) The method according to claim 32, wherein a first device sends the first stream of data elements to a third device, and a second device sends the second stream of data elements to the third device.

35. (New) The method according to claim 34, wherein the third device places the data elements in a data buffer the size of the packet, and sends a signal to the first and second device when either the buffer is full, or stops sending confirmations until the buffer is full.

36. (New) The method according to claim 32, wherein a first device sends the first stream to a second device, and the second stream to a third device.

37. (New) The method according to claim 36, wherein the second device and third device immediately at receipt forward the data they received from the first device to each other.

38. (New) The method according to claim 37, wherein the second and third device have been provided with a data buffer the size of the packet, wherein the received data are placed in the data buffer and the first and second device send a signal to the first device when the respective data buffer is full.

39. (New) A method for sending a data packet of digital data elements arranged 1..n to a first device in an ad-hoc data network of devices provided with a data processing unit, a data buffer and software having receiving routines for receiving data elements from at least two transmitting devices in the data network, wherein at least a second device and a third device in the network simultaneously send data elements together making up said data packet, said second device sending data element 1 and further upward in sequential order, and said third device sending data element n and going downward in sequential order, to said first device, which first device adds together these data elements to form said data packet.

40. (New) The method according to claim 39, wherein the software has further been provided with transmission routines for transmitting data packets, received from the transmitting device or devices in the data network to at least one receiving device that is connected to the data network, independent of the transmitting device or devices.

41. (New) A method for receiving a packet of data elements 1..n which are sent in at least a first stream of data elements starting with sending data element 1 and further upward in sequential order, and a second stream of data elements starting with sending data element n and going downward in sequential order, wherein a device provided with a data storage defines a data buffer in the data storage for n data elements, and receives the first stream of data elements and the second stream of data elements, wherein the device subsequently fills the data buffer starting at the front of the data buffer and sequentially upward with the first stream of data elements and fills

the data buffer starting with rear of the data buffer and sequentially downward with the second stream of data elements.

42. (New) The method according to claim 41, wherein the device informs the source or sources of the streams of data elements when the data buffer is full.

43. (New) A method for sending a packet of digital data elements 1..n, wherein a device provided with a data storage creates a data buffer in the data storage for n digital data elements, stores the digital data elements in sequential order in the data buffer, and sends the digital data elements in a first stream starting with data element 1 and further upward in sequential order and a second stream starting with data element n and going downward in sequential order.

44. (New) The method according to claim 43, wherein the device stops sending after receipt of a signal.

45. (New) Software for sending a packet of digital data elements arranged 1,..,n, comprising a first transmission routine for sending a first stream of digital data elements starting with data element 1 and further upward in sequential order, and a second stream of digital data elements starting with data element n and going downward in sequential order.

46. (New) Software for receiving a packet of digital data elements arranged 1,..,n, comprising a first receiving routine for receiving a first stream of digital data and a second receiving routine for simultaneously receiving a second stream of digital data, and a first storing routine for storing the first stream of digital data in a memory starting at the front of the memory and sequentially filling the memory towards the end, and a second storing routine for storing the second stream of digital data starting at the end of the memory and filling the memory sequentially towards the front, and a

stop routine for ending the receiving of digital data when the memory is full or n digital data elements have been received.

47. (New) An apparatus for sending a packet of digital data elements 1..n, comprising a memory for storing the packet of digital data, a first transmitter for sending a first stream of digital data elements, starting with data element 1 and further upward in sequential order, and a second transmitter for sending a second stream of digital data elements, starting with data element n and going downward in sequential order.

48. (New) An apparatus for receiving a packet of digital data elements, comprising a memory for storing the packet of digital data elements, a first receiver for a first stream of digital data elements, and storing it in said memory, starting from the front and further upward in sequential order, and a second receiver for a second stream of digital data elements, and storing it in said memory, starting from the back of the memory and going downward in sequential order.

49. (New) Data carrier, provided with software according to one of claims 47 and 48.

50. (New) Device provided with software according to one of claims 47 and 48.